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An unending variety of topics

Tuesday, October 09, 2007

The new gigaprojects

A new era of commercial gigaprojects is upon us, and the source is almost entirely our insatiable demand for hydrocarbons. Despite high political risks, global warming and "peak oil" fears, and shortages of skilled employees, there are dozens of energy-related projects in the works or on the drawing boards in the multi-billion dollar range, with several topping $10 billion. Is it the sign of a petroleum bubble, or does it simply reflect the new reality of a long-term higher worldwide demand for hydrocarbons? Here are some of the more interesting projects. Note that the dollar cost of these projects is often a bit higher than quoted here because of depreciation of the dollar versus most currencies since the cost quotes in my sources were made.

One of the biggest expansions into relatively new territory is that of tar sands. It is estimated that over $100 billion will be invested in Canadian tar sands projects over the next decade. Two of these projects are Petro-Canada's Fort Hills Project($25 billion) and the Chinese/Canadian Northern Lights Project ($4.5 billion).

Many of the biggest projects are to extract natural gas (methane). $11 billion of investment was recently completed for Qatargas II, and China is cooperating with Iran on the $16 billion project to develop the Iranian North Pars field. Woodside Corp.'s $9 billion investment in the Pluto project is expected to eventually top out at over $30 billion. Sakhalin 2 is a $20 billion project of Shell and Gazprom to extract oil and gas from beneath the coast of Sakhalin Island, along the east coast of Russia.

Oil tends to be a bit more dispersed than natural gas, and consequently inidividual oil projects tend to be smaller. But in total, OPEC countries have projects underway or plans for $254 billion worth of oil field development and expansion. The largest projects tend to be pipelines: a proposed pipeline from Siberia to China and the Sea of Japan for $12-$16 billion, Malaysia wants to build a $7 billion pipeline to save oil tankers from the troubles and risks of sailing through the Straits of Malacca, and a $4 billion pipeline is being built between Chad and Cameroon. But other oil-related gigaprojects are in the works. Kuwait is planning a $14 billion monster oil refinery. CONOOC and Shell have agreed to build a $4.3 billion plastics (ethylene and propylene) factory in Guandong Province, China. Investors have ponied up more than $1 billion simply to search for oil in New Zealan's Great South Basin. And oil revenues have allowed Saudi Arabians to dream of building a city from scratch for a cool $26 billion. But topping our list of gigaprojects, the overall cost of developing the Kashagan fields in Kazakhistan is now estimated at $136 billion, which may make it economically unviable.

Meanwhile, there are also numerous offshore oil operations being developed in the $500 million - $2 billion range, with a few such projects (such as the Hebron field off Newfoundland, $5.6 billion) surpassing that range. More on deep sea projects -- now including not just oil, but diamonds and other minerals -- here.

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Nick Szabo

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